

Engineering drawings are the standard/accepted way for engineers to communicate with the personnel in the shop - they are the 'language' by which you convey spatial, 3D ideas to someone else in a portable, record-keeping (2D = paper) manner. Therefore, it is important that the desired intent be clearly communicated. As with any language, there are 'vocabulary' and 'grammar' that need to be followed - or you will send the wrong message (and waste time and effort). Different organizations have slightly different specific requirements (dialects), but the basics have to be there!

For anyone to use the training shop at the College of Engineering in the University of Delaware, he/she must submit an engineering drawing signed by his/her supervisor, instructor or advisor to a shop supervisor.

In order for a drawing to be approved by a shop supervisor, drawings must include:

- 1) a UD title block with at least the following completed:
  - organization (class, club, advisor – if research without a class);
  - part name;
  - drawn by;
  - scale (integer scales);
  - quantity;
  - date;
  - material;
  - FAI (bill to);
  - source of materials (student shop or project/activity);
  - approved by (this is where the drawing will be 'signed');
- 2) border;
- 3) engineering drawings of the specific part/system:
  - required number of views; 3rd angle assumed - unless otherwise marked;
  - units will be assumed as inches - unless otherwise marked;
  - all features dimensioned;
  - all dimensions toleranced (directly OR this may be done with title-block defaults) – you should be ready to explain, smaller tolerance = more time and expense;
  - hidden lines – as needed for clarity;
  - centerlines;
- 4) other considerations:
  - add notes for clarity, explanation;
  - in general, do NOT mix assembly and detailed info on one drawing - bring in assembly AND detailed drawings in the drawing package;
  - modifications to existing parts do NOT require dimensions of all existing features – in general, dimension only new features and modifications to existing features, additional dimensions may be required for clarity; use notes to document new features or modifications and indicate that this is as an existing part in the material source location on the title block;
  - on-drawing corrections/white-out are allowed; however, they MUST be neat and carefully made: hand-done drawings and/or corrections must meet the same drawing specifications as computer-generated drawings;
  - two identical drawings are required – the signed, 'approved by' version as the shop's record and the working drawing that will be used in actually making the part.

TOLERANCES UNLESS OTHERWISE NOTED:		ORGANIZATION:	
DECIMAL: .XXX ± .02 .XX ± .03 .X ± .05		UNIVERSITY of DELAWARE	
FRACTIONAL OR INTEGER: ± 1/16		PART NAME:	
ANGULAR ± 0.5°		DRAWN BY:	
		SCALE:	QUANTITY:
		DATE:	
		MATERIAL:	
		FAC (bill to):	
		MATERIAL SOURCE:	
		APPROVED BY:	
		DRG. NO.:	